

Channel Islands National Marine Sanctuary Marine Reserves Working Group Meeting

Thursday, April 13, 2000
8:30 A.M. – 5:00 P.M.
Marine Classroom
125 Harbor Way Santa Barbara, California

Draft Meeting Summary

In Attendance:

John Ugoretz, Chair (alt. for Patty Wolf)
Sean Hastings, Co-Chair (alt. for Matt Pickett)
Bob Arenz (alt. for Dr. Mike McGinnis)
Locky Brown
Kate Faulkner (alt. for Gary Davis)
Robert Fletcher
Dr. Craig Fusaro
Dale Glantz
Neil Guglielmo
Greg Helms (alt. for Warner Chabot)
Mark Helvey
Deborah McArdle
Chris Miller
Tom Raftican

Steve Roberson
Bruce Steele (SAC) (alt. for Marla Daily)
Alicia Stratton

John Jostes, Facilitator

Staff from CINMS: Dr. Satie Airame, Ben
Waltenberger and Mettja Hong

Members of the public

("alt." designates alternate for primary working
group member)

- 1. Welcome and Introductions:** The meeting opened up with introductions from John Ugoretz and Sean Hastings, both of whom were representing the MRWG's co-chairs. John Jostes reported that Michael Eng regretfully could not attend this meeting because of activities related to his new position at the U.S. Institute for Environmental Conflict Resolution (USIECR). Due to the number of alternates in attendance, John Jostes reemphasized the importance of communication between the alternates and the principals to ensure continued progress on matters of process and substance.
- 2. Adoption of Meeting Summary from March 16, 2000 Working Group Meeting:** John Jostes led the group in a review of the March meeting summary. Alicia Stratton noted her presence at the last meeting. Both Locky Brown and Dr. Craig Fusaro suggested minor changes and corrections. The changes were noted and the summary accepted.
- 3. Review Agenda:** John Jostes briefly reviewed the agenda, which was accepted by the MRWG.
- 4. Update on Emerging Technical Information and Data Collection Efforts:**

(A) Update on the Status of Resources Report [as Input to the May MRWG Meeting]: Sean Hastings reported that the Status of Resources Report will be ready for public presentation in mid-May. It is part of the Management Plan's EIS Process. The report was not required by NEPA, but the Sanctuary felt that it was necessary to adequately assess the resources for the Management Plan. The report, prepared by TetraTech, will synthesize existing species and their status from Pt. Sal to Pt. Mugu. Because the report will become available ahead of schedule, the Status of the Resources public forum was rescheduled for May 17, and the MRWG meeting was rescheduled for May 18. Several members expressed concern over the meeting date changes without prior consultation. Sean indicated that the scheduling process was one in which the needs of a full range of interests needed to be considered and that the selected dates reflected a best effort, given the inherent difficulties of scheduling. Resolution of the meeting dates and times was deferred to later in the meeting (see Item 9A below).

Craig Fusaro noted the existence of a parallel data gathering process being conducted by the CDFG regarding the marine resources of the California Coast in general and suggested a collaboration between the Department of Fish and Game's efforts and CINMS' Status of the Resources Report.

Chris Miller raised concerns regarding public input to the EIS Sanctuary Management Plan, specifically, noting that if the EIS preceded the development of a recommendation on marine reserves that the interested public would be precluded from commenting on the associated environmental impacts of a reserve or system of reserves. Sean Hastings and John Jostes noted that the MRWG's consensus-based process was intended to effectively integrate public concerns over environmental and other impacts into the reserve evaluation and designation process. They also noted that because of this, constituent outreach and meaningful feedback was critical to the success of the efforts of the MRWG. Also, the recommendation would be included in a Supplemental EIS which includes a formal public review and comment period.

(B) New Hires and Local Liaison with Socio-Economic Panel (SEP): Sean Hastings reported that TetraTech has contracted six people to focus on socioeconomics: Bob Leeworthy - commercial fisheries, except squid, Peter Wiley - recreating fishing, Charles Kolstad - charter and party boat businesses, Mick Kronman - anecdotal data, Dr. Craig Barlotti - commercial fisheries, except squid, and Dr. Carolyn Pomeroy - squid fisheries. All of the socioeconomic data will be coordinated by Bob Leeworthy, who will synthesize it by July, 2000.

Chris Miller brought up his concern with the make-up of the socio-economic panel concentrating solely on the economic aspect and not the social perspective. Sean emphasized the fact that the MRWG are members who can provide social and cultural perspectives to compliment the work of the SEP, as well as Mick Kronman's anecdotal data collection from 45 different Sanctuary users.

(C) Update on Designating "Species of Interest": Deferred due to time constraints.

(D) Discussion on Habitat Characterization modeling: Deferred due to time constraints.

5. **Science Panel Discussion on Marine Reserve Design Theory:** Three Science Panel members, Drs. Daniel Reed, Robert Warner, and Libe Washburn, provided an overview of the variables affecting reserve design and summarized trade-offs associated with alternative reserve designs. The key points presented and discussed are summarized in the paragraphs below.

Ecological Criteria for Marine Reserves

The Science Panel members recommended several ecological guidelines for marine reserve design from a current paper by Roberts *et al.* entitled "Ecological criteria for evaluating candidate sites for marine reserves" which is under review in the journal *Ecological Applications*. The ecological criteria include (1) biogeographic representation across reserves, (2) habitat representation within reserves, (3) habitat heterogeneity and adjacency within reserves, (4) adequacy of size, (5) connectivity, e.g. for larval export, (6) vulnerable life history stages, (7) spawning areas, and (8) locations of special species or habitats of concern. Several exclusion criteria, such as harbors and areas that are prone to catastrophic events are recommended to minimize human impacts in the reserve zone.

Biogeography of the Channel Islands

The Science Panel members described the biogeographic context of the Sanctuary. Although some of the physical habitats might be similar across the region, the water temperature and the species composition differ from north to south. In order to protect representative habitats and populations of concern in the Channel Islands, the Science Panel members recommended a reserve network that would include reserves in all three of these zones.

There was some concern about movements of the transition zone with changes in climate. Dr. Washburn described the pattern of currents in the Santa Barbara Channel as being a counter-clockwise flow pattern that breaks down in the winter. The bowl-like shape of the Channel probably contributes to the establishment of the counter-clockwise eddy. The species that occupy the transition zone also occur either in the northern and southern biogeographic provinces, or both. The Science Panel members suggested that, although the transition between warmer and cooler waters may shift from year to year, organisms that characterize the biogeographic provinces (particularly those that are sessile) are unlikely to shift their distributions.

Bob Fletcher recommended that reserves be designed to protect larval sources upstream of habitat suitable for species of interest. Considering the Channel Islands region, the cold-water area at the north end of San

Miguel could provide a source of larvae to islands. Another Working Group member interjected the need to protect habitat for adult fish (and other species) as well as larval sources.

Species of Interest in the Channel Islands

The Science Panel members reinforced the emerging consensus that rockfish are declining, noting that the reason for the decline is not well understood. Pollutants and changes in climate may contribute to the rockfish declines. It is not known whether or not fishing pressure is the cause of the rockfish decline, but fishing certainly does not contribute to the rockfish recovery. The Science Panel agreed that adult rockfish habitats could be identified and protected. Expert knowledge as well as information from local fishermen, could help identify suitable rockfish habitat.

State legislation (Marine Life Management Act) also requires improved management of nearshore fishes, including rockfishes. Bob Fletcher, Sportfishing Association of California representative and member of the Pacific Fisheries Management Council representative, reminded the MRWG and the Science Panel members that rockfish are protected for part of the year. Each year, rockfish fishing in southern California is closed in the months of January and February.

The Science Panel members emphasized that a single reserve design would not protect all species of interest. The Science Panel members suggested either limiting the species of interest to a few key species, or preferably, using a habitat-based approach as a guideline for marine reserve design.

Reserve Monitoring and Evaluation

The concern about environmental fluctuations reinforced the need for adaptive reserve management that would allow management changes in response to success and failure to meet goals and objectives for marine reserves. The Science Panel emphasized the need for ongoing monitoring and evaluation of reserves.

The MRWG expressed interest and support of the BACI (before/after/control/impact) experimental design approach to marine reserves. The Science Panel members agreed that the BACI could be used to evaluate the efficacy of reserves in increasing the abundance and size of species within the reserve relative to non-protected areas outside the reserve. Science Panel members also indicated that BACI could also be used to evaluate the status and sustainability of a fishery by comparing populations inside and outside of reserves before and after the reserve was created. However, Science Panel members expressed doubt that BACI could be used to evaluate the effectiveness of reserves in increasing the abundance and/or size of fish in areas outside the reserve for most species of interest which have widely dispersing larvae. The BACI design is limited because of the difficulty and uncertainty of locating a suitable control site that is not influenced by the reserve. Larval production exported from the reserve is likely to be diluted over a large area making it difficult to detect increases in population abundance. It may be possible to evaluate the effectiveness of reserves in increasing the abundance and/or size of fish in areas outside the reserve by monitoring areas at increasingly longer distances from reserves.

Concerns About Reserve Enforcement

One of the main concerns of the commercial fishing representatives was the issue of access to safe harbors during foul weather. They were concerned that reserve designation would preclude access to enter, cross, or anchor in a reserve during dangerous ocean conditions. This concern brought up the issue of enforcement of reserve regulations. The MRWG agreed that administrative design of the reserves is important and that the reserve design options should be reviewed by a group of law enforcement experts who could evaluate the potential success of the proposed legislation. The discussion with enforcement experts was planned for early August, after the scientific and socioeconomic information will be available. One Working Group member recommended that rocky areas provide suitable habitat for many species, and rocky areas provide a natural barrier to fishermen, simplifying enforcement of reserve regulations.

Reserve Design Trade-Offs

The Science Panel members provided a brief summary of the trade-offs associated with alternative reserve designs.

1. There is a positive relationship between reserve size and the number of species protected within the reserve boundaries: larger reserves tend to include a greater diversity of habitats, and thus protect more species.
2. A single large reserve will not effectively protect all species of interest for several reasons.
 - Not all species occur throughout the Channel Islands region.
 - Different species have different life history strategies.
3. Populations in small reserves are more vulnerable than populations in large reserves for several reasons.
 - Small populations are more likely to become locally extinct as a result of unpredictable environmental fluctuations or catastrophic events, such as oil spills.
 - For species with low dispersal and non-dispersing gametes, small populations may experience deleterious or lethal effects due to inbreeding.
 - For species with low dispersal and non-dispersing gametes, mate selection within small populations may be limited due to demographic stochasticity.
4. Enforcement of regulations is more difficult for a network of small reserves than a single or a few larger reserves.
5. The ratio of area to circumference may affect reserve effectiveness.
 - Increased exposure to human activities (e.g., outflow from industrial areas, seismic exploration, and others) at the edge of reserves may affect environmental quality (e.g., sedimentation, level of pollutants) or behavior of species (e.g., breeding or foraging).
 - Greater reserve edge may contribute to greater spillover of species of interest to the commercial and recreational fisheries.
6. Several reserves that are close together are more vulnerable to catastrophic environmental events than several reserves that are widely spaced.
7. Reserves that are widely spaced may not provide the necessary connectivity between life history stages.

Reserve Size

The preferred size or shape of marine reserves was not defined by the MRWG. The Science Panel representatives felt that reserve size is a socioeconomic decision. One of the NCEAS (National Center for Ecological Analysis and Synthesis) Working Group papers reviews the subject of reserve size, suggesting between 10-50% of the area of interest for reserve designation. There are scientific methods for determining the percentage of habitat to be protected, given the minimum acceptable population sizes for species of concern and the time horizon for management. The Science Panel members requested input from the MRWG about these criteria.

MRWG members expressed their appreciation to Drs. Reed, Warner & Washburn for their valuable insights and reinforced the value of regular and focused input from Science Panel members on technical issues. The dialogue among Science Panel and MRWG members continued on broader issues for the remainder of the morning (see below).

6. Feedback from Science Panel to MRWG on Draft Goals and Objectives

This item was introduced by Sean Hastings who handed out a refinement and synthesis of the MRWG's draft Goals and Objectives by the MRWG Planning Team. The Goals and Objectives were reorganized into three general categories: Reserve Design, Reserve Monitoring and Evaluation, and Reserve Administration. After a brief discussion, a general consensus emerged among those present that the refinement was useful and should be incorporated into the overall process of developing a recommendation. Satie Airame noted that she had received feedback from at least one Science Panel member indicating that goals developed as a result of the March meeting were useful in terms of providing clear direction to the Science Panel about the MRWG's intention. After some discussion, the MRWG recommended that the Science Panel use the ecological criteria to develop a set of "goal-oriented options" to meet the MRWG goals and objectives for marine reserves. The options will be spatially explicit, in the form of maps, with a written justification for selection of particular areas. Unless a single option is required to meet a particular goal, the MRWG requested a set of options for each goal. For example, the set of options might explore the trade-off between reserve size and the number of reserves. Each option should include a summary of biological costs and benefits. The MRWG requested these options be provided to them in sufficient time for a meaningful discussion at their July 18 meeting. These options will be subsequently used by the MRWG to craft their reserve alternative at their August 22-23 meeting.

7. Relationships among Information Collection, Reserve Design and Management Plan Issues:

(A) Clarification of Relationships among the SAC, Permanent and Ad-Hoc Working Groups and Technical Consultants and Advisory Groups: Sean Hastings noted that in the "Related Processes and Regulations" section of the MRWG binder contains a handout on the MRWG's role in relation to other ongoing efforts of the Sanctuary. Since the Management Plan/EIS is due in June and the MRWG process will not be complete until after June, CINMS will hold place in the Management Plan to include the MRWG/SAC's recommendations regarding marine reserves. CINMS will also have to provide a supplemental EIS to deal with reserves. The MRWG's recommendation on the establishment of reserves will go through the SAC to the Fish and Game Commission, the Pacific Fisheries Management Council, and NOAA headquarters.

Bob Fletcher suggested the addition of the Office of Administrative Law to the "Marine Reserves State and Federal Rulemaking Procedures" document in the MRWG binder.

(B) Parallel Data Collection and Synthesis Efforts: John Jostes reported that he had met with Gary Davis regarding a scientific data collection and synthesis effort being considered by the National Park Service. Because Gary was not present at the meeting, John sought to summarize his understanding of Gary's proposal with the understanding that a subsequent MRWG discussion would need to take place on the issue when Gary was in attendance. He noted that Gary wanted to bring the best scientific options to reserves and that his proposal was to utilize the expertise of several individuals at NCEAS to develop a reserve design based solely on science and funded by the Park Service. If funded, Gary anticipated this effort would begin sometime in September. John noted that Gary did not view this effort as outside the MRWG process but complimentary to it. He also noted that the Co-chairs had voiced concern to him that such a proposal had the potential to be viewed as counterproductive if it resulted in competing proposals for reserve design, or compromised the ability of members of the Science panel to provide independent recommendations to the MRWG.

In the discussion that followed, several MRWG members expressed concern over Gary's proposal. Summarized are a list of these concerns: 1. The ground rules provide a mechanism for individual MRWG members to constructively voice their concerns over matters of substance and process. If Gary or anyone else has a problem with the direction, timing or products of the MRWG, there is a process for addressing those concerns as a group, rather than as individuals. 2. The group, as a whole, agreed to use the best available science to develop a recommendation. If individual members fund efforts to develop separate recommendations, how do you resolve conflicting recommendations when there is not consensus on the underlying science? 3. Several MRWG members and their agencies have made explicit endorsements of and commitments to the process. It is important to check in with the Park Service and other MRWG members to reaffirm their formal commitment to the collaborative process; and, 4. Development of a marine reserve option by scientists selected without a consensus of the group as a whole significantly increases the perception of bias.

Several members also noted that the strength and power of the consensus process and the recommendation that it generates lies in everybody arriving at the end of the process with a recommendation that they can all support, without reservation. Kate Faulkner, Alternate for Gary Davis, indicated she would take these comments back to Gary. The MRWG agreed to further address this topic when Gary is present.

- 8. Constituent Outreach and Public Forum Planning:** John Jostes emphasized the importance of interacting with each member's constituents, particularly as reserve options are developed and refined. He asked those present for an update on outreach to each of their respective groups. The following members provided input on their constituent outreach efforts:

John Ugoretz (CDFG): Had a booth on marine reserves at a fishing show and was surprised at the lack of interest in the topic. He believes that we might not be reaching the sport fishing community.

Bob Fletcher (PFMC): Will update PFMC's Board of Directors at the next meeting. He believes that when the MRWG comes to sighting options for reserves, more public interest will follow.

Tom Raftican (UA): Asks his constituents about reserves twice a month, but does not get a lot of reaction. He also believes that when actual sites for reserves are discussed, reaction will rise.

Greg Helms (CMC): Discussed the Conservation Working Group meeting on water quality. He would like to have a Conservation Working Group meeting on marine reserves in the future.

Chris Miller (PCFFA): Met with the Pacific Coast Federation of Fishermen Association to endorse the MRWG process. He also went down to Ventura with Craig Barilotti to have the fishermen participate in the socio-economic study. By doing so, he believes that they expanded the fishermen network.

Deborah McArdle: Met with IOCN in D.C. and discussed the MRWG process. She also reported that Sea Grant had a meeting about outreach where Sean Hastings and Ben Waltenberger participated and presented. Sea Grant is also hiring a post-doc that might be able to help out with the process.

Locky Brown: Reported that his letter is on the Council of Divers for Channel Islands website and that there now exists a link to CINMS' website. He's also been asked by several dive clubs to speak about the MRWG.

Sean Hastings: Received letters of endorsement from NOS, thanking the Fish and Game Commission, DFG, and NMFS for their support. Mike Murray is attending a meeting on marine reserves for the Olympic Coast.

Neil Guglielmo: Passed out flyers about the MRWG. He will be attending a meeting in San Pedro and has also talked to Dr. Pomeroy regarding charts where fishermen can mark their fishing areas. He believes that the fishermen would like areas to be drawn on maps as to which areas the MRWG is thinking about for reserves.

Bruce Steele: The urchin industry is reviewing the status of the Keeley Bill. He's looking at what they need to do to sustain their fishery and what they need to do to plan for the future.

Related Comments:

Steve Roberson suggested that Bob Fletcher write an editorial in the Western Outdoors Fishermen Newspaper, which is read by several thousand people. He also mentioned that the DFG has a column in the same publication that could answer questions on reserves. Craig Fusaro asked if the MRWG should task the co-chairs to draft a letter, article, etc...regarding marine reserves for public outreach purposes. He reminded everyone of the "Miller-Warner" rule that when you talk to the press, let the rest of the MRWG know. He also referred to an e-mail regarding a proposed Southern Channel Islands Sanctuary. Regarding the proposed South Coast Sanctuary, Sean Hastings noted that he had received a call from Representative Steve Horn's assistant asking how to establish a Sanctuary. Discussion ensued regarding the proposed Sanctuary, but the proposal appears very preliminary.

9. Implications on Process and Schedule:

(A) Review of Current Schedule, Milestones and Meeting Dates: John Jostes led the discussion on this topic. He noted that the current schedule calls for the MRWG to finalize a recommendation for the SAC by the end of September. He reviewed the steps in achieving that timeline, as well as the relationships among the MRWG, Science Panel, Socioeconomic Panel and outside consultants and staff. Bruce Steele suggested sending the goals and a letter on how the MRWG feels about how the process is going to the FGC meeting. Sean will draft a letter and circulate it to the MRWG for their comment in the near future.

(B) Finalized Meeting Schedule – May through October, 2000 (See handout): At least five members of the MRWG indicated that they would not be able to attend the May 18 meeting and would prefer to reschedule the meeting to June 8th. Bob Fletcher indicated he would like to change his alternate to Merit McRae, the same as Tom Raftican's alternate. The May 18th MRWG meeting was rescheduled to June 8th by a consensus of the group.

Final Comments:

Prior to adjourning the meeting, Facilitator John Jostes asked those present to reflect on the accomplishments of the day, and share the perspectives they would take back to their constituencies and, for alternates, to the MRWG members they were representing.

Bob Fletcher: Believes that MRWG will come to a consensus and that it will be more of a political decision than scientific, however, science will validate the recommendation.

Chris Miller: Emphasized the importance of people to think about the recommendation the MRWG can make for implementation. He believes in an adaptive policy design for reserves. He also believes that the progress of reserves is being held back.

Bob Arenz: Feels good about the process. He has two groups of constituents: the Conception Coast Project and the UCSB library group.

Greg Helms: He will tell his constituents that the MRWG is committed to this process and that people should get ready to support the MRWG's decision.

Kate Faulkner: Impressed by the amount of data analysis and collection, as well as by the unity and commitment of the MRWG. She will convey to Gary Davis the depth of concern by members of the MRWG over his proposal to develop a science-based reserve option with a grant from the NPS.

Mark Helvey: Thanked Sean and Satie for reorganizing the goals and objectives.

Neil Guglielmo: Feels that this process is moving too fast.

John Ugoretz: Feels that a lot was accomplished today. He will report back to Patty and Dave.

Sean Hastings: Thanked everyone for being so patient.

Meeting adjourned at 4:10 p.m.

Summary of Action Items:

1. Greg Helms will tape the May 17th public forum on the Status of Resources and circulate it to those MRWG members who could not be present.
2. John Ugoretz will contact enforcement officials and initiate efforts to organize a presentation on enforcement and implementation issues at the August MRWG meeting.
3. Sean Hastings will draft a letter regarding how the MRWG feels the process is going, circulate it to the MRWG, and send it to the Fish and Game Commission.
4. Add "Office of Administrative Law" to the "Marine Reserves State and Federal Rulemaking Procedures" section of the MRWG binder.
5. Contact Deb Neilson regarding an update on the reserves process in her column.
6. The May 18th MRWG meeting has been reschedule to June 8th.
7. TetraTech will present at the June 8th meeting.
8. A revised schedule will be sent out.

Future MRWG Meeting Dates:

June 8;
June 22;
July 18;
August 22-23;
September 26;
October 18, and;
November 16.